

ELECTRICAL SAFETY: SELF-STUDY – TEST - A

EMPLOYEE NAME _____ DATE: _____

This test is intended to be taken “Open Book” meaning you can use resources from the Safety Web Page to learn information on this subject. Return the completed test to Safety.

25 Questions (5 pages)

Passing Score: 70% or higher (18 or more correct; up to 7 incorrect allowed).

Select the choice that best answers each of the following questions.

1. Current flows through the human body when one part contacts an electrically:
 - A. Energized part and another part contacts a non-conductive surface
 - B. De-energized part and another part contacts a conductive surface
 - C. De-energized part and another part contacts a non-conductive surface
 - D. Energized part and another part contacts a conductive surface

2. Which of the following is true about an arc-flash that jumps through the air?
 - A. The temperature lowers as the air cools it
 - B. It occurs within one second
 - C. Can cause only minor burns
 - D. It creates a thirty-five thousand degree blast

3. If you don't wear proper fire-resistant clothing and get exposed to an arc-flash, you are more likely to get:
 - A. Minor scalding
 - B. Minor burn injuries
 - C. Severe burn injuries
 - D. No burn injuries, as there is no direct contact

4. Which of the following can vaporize and cause inhalation injuries?
 - A. Flying debris
 - B. Explosive gases
 - C. Metals
 - D. Dust

5. When the skin touches an overheated, energized piece of equipment:
 - A. Electrical burns occur
 - B. Thermal contact burns occur
 - C. Arc burns occur
 - D. Inhalation burns occur

6. Injuries caused by electricity:
 - A. Can lead to a fatal fall
 - B. Can cause only burn injuries
 - C. Are a result of direct contact
 - D. Do not affect the muscle or bone

7. What is the safest way to work around electricity?
 - A. To work from a safe distance
 - B. To work at a low voltage level
 - C. To wear protective equipment
 - D. To de-energize the system completely

8. Why is it sometimes necessary to work on live circuits?
 - A. Shutdown is complicated
 - B. Shutdown is time consuming
 - C. People need to be trained to work on live circuits
 - D. Shutdown may cause damage to facilities

9. People qualified to work on or near exposed energized parts can:
 - A. Work on all types of equipment
 - B. Determine the nominal voltage
 - C. Exceed equipment limitations
 - D. Work safely without PPE

10. In order to protect yourself from being electrocuted while working on exposed live parts, always wear:
- A. Cotton gloves
 - B. Leather gloves
 - C. Synthetic gloves
 - D. Rubber gloves
11. While working with electrical equipment always follow the rule:
- A. Test before touch
 - B. Test by touch
 - C. Never test before touch
 - D. Never touch after test
12. Which of the following statements is true regarding the use of a multimeter?
- A. A standard meter can be used for all voltage levels
 - B. Rough handling does not cause faulty readings
 - C. Equipment limitations should not be exceeded
 - D. They cannot be used for testing low voltages
13. What can cause electrical equipment and installations to become unsafe?
- A. Grounding
 - B. Loose connections
 - C. Insulation
 - D. Guarded live parts
14. Which of the following acts is a large contributor to electrical accidents?
- A. Frequent inspection of circuits
 - B. Determining the voltage with a multimeter
 - C. Failure to exceed the equipment limitations
 - D. Using tools too close to energized parts

15. How should the insulation be?
- A. It must be adequate for the voltage
 - B. It must be adequate for the current
 - C. It must be adequate for the temperature
 - D. It must be adequate for the equipment size
16. Which of these methods prevents people from coming too close to the energized parts?
- A. Insulating
 - B. Guarding
 - C. Grounding
 - D. Dissipation
17. What happens if a piece of electrical equipment draws too much current?
- A. The equipment will give more output
 - B. The equipment will be overheated with no other damage
 - C. The equipment will not be affected at all
 - D. The equipment will become overheated and could result in fire
18. Which of the following interrupts the circuit when there is a five milliamp difference between the hot wire and neutral?
- A. Circuit breaker
 - B. Ground fault circuit interrupter
 - C. Safety fuse
 - D. Overcurrent protection device
19. What is the primary function of a GFCI?
- A. To serve as a switch to make and break the circuit
 - B. To save lives by breaking circuits and preventing shocks
 - C. To protect the equipment from overheating
 - D. To prevent the circuit from drawing too much current

20. What does NEC stand for?
- A. National Electrical Code
 - B. National Electronic Code
 - C. National Electrical Circuit
 - D. National Electronic Circuit
21. A flash hazard analysis is used to determine the:
- A. Level of PPE required to be worn
 - B. System voltage
 - C. Current drawn
 - D. Equipment temperature rise
22. Which of the following is suitable to wear under flame-resistant outerwear?
- A. Rayon underwear
 - B. Cotton underwear
 - C. Polyester underwear
 - D. Nylon underwear
23. A job briefing should be conducted:
- A. Before starting each job, only with the team leader
 - B. After starting the job and just before testing the circuit
 - C. Before starting each job, with everyone involved
 - D. Soon after de-energizing the circuit
24. An unsafe practice when working around areas containing live parts is:
- A. Having a trained observer nearby
 - B. Keeping the area well illuminated
 - C. "Blind reaching" for parts
 - D. Avoid wearing metal (rings, wristwatches, neck chains, etc.)
25. A correct precaution to be followed when working with live parts is:
- A. Tools should not be double insulated
 - B. Power tools need not be grounded
 - C. Arcing parts of equipment should be kept open
 - D. Tools contacting live parts should be electrically insulated